CONTENTS

*Editorial*

*N.Y.-s. Kiang (U.S.A.)*
Curious oddments of auditory-nerve studies 1

COCHLEAR MORPHOLOGY AND MECHANICS 17

*L.U.E. Kohllöffel (F.R.G.)*
Cochlear mechanics: Coiling effects (I, II) and the absorption equation (III) 19

*D.M. Freeman (U.S.A.)*
Anatomical model of the cochlea of the alligator lizard 29

*J.L. Goldstein (U.S.A., Israel)*
Modeling rapid waveform compression on the basilar membrane as multiple-bandpass-nonlinearity filtering 39

HAIR CELLS 61

*M.L. Wiederhold, J.S. Sharma, B.P. Driscoll and J.L. Harrison (U.S.A.)*
Development of the statocyst in *Aplysia californica* I. Observations on statoconial development 63

*M.J. Mulroy, R.F. Fromm and S. Curtis (U.S.A.)*
Changes in the synaptic region of auditory hair cells during noise-induced temporary threshold shift 79

*J.M. Goldberg, A. Lysakowski and C. Fernández (U.S.A.)*
Morphophysiological and ultrastructural studies in the mammalian cristae ampullares 89

MORPHOLOGY OF AUDITORY NERVE 103

*M.C. Brown and J.V. Ledwith, III (U.S.A.)*
Projections of thin (type-II) and thick (type-I) auditory-nerve fibers into the cochlear nucleus of the mouse 105

*R. Romand, H. Sobkowicz, M. Emmerling, D. Whitlon and D. Dahl (France, U.S.A.)*
Patterns of neurofilament stain in the spiral ganglion of the developing and adult mouse 119

*D.D. Simmons, L. Manson-Gieseke, T.W. Hendrix and S. McCarter (U.S.A.)*
Reconstructions of efferent fibers in the postnatal hamster cochlea 127

*J.B. Nadol Jr. (U.S.A.)*
Degeneration of cochlear neurons as seen in the spiral ganglion of man 141

*R.D. Hall (U.S.A.)*
Estimation of surviving spiral ganglion cells in the deaf rat using the electrically evoked auditory brainstem response 155

*E.M. Keithley and K.L. Croskrey (U.S.A.)*
Spiral ganglion cell endings in the cochlear nucleus of young and old rats 169

SIGNAL PROCESSING IN THE AUDITORY NERVE 179

*R.C. Kidd and T.F. Weiss (U.S.A.)*
Mechanisms that degrade timing information in the cochlea 181

*M.C. Liberman (U.S.A.)*
Effects of chronic cochlear de-efferentation on auditory-nerve response 209

*B. Delgutte (U.S.A.)*
Two-tone rate suppression in auditory-nerve fibers: Dependence on suppressor frequency and level 225

MORPHOLOGY OF HIGHER AUDITORY CENTERS 247

*E.M. Rouiller, M. Capt, J.P. Hornung and P. Streit (Switzerland)*
Correlation between regional changes in the distributions of GABA-containing neurons and unit response properties in the medial geniculate body of the cat 249

*D.A. Godfrey, K.L. Beranek, L. Carlson, J.A. Parli, J.D. Dunn and C.D. Ross (U.S.A.)*
Contribution of centrifugal innervation to choline acetyltransferase activity in the cat cochlear nucleus 259

*J.C. Adams and E. Mugnaini (U.S.A.)*
Immunocytochemical evidence for inhibitory and disinhibitory circuits in the superior olive 281

SIGNAL PROCESSING IN HIGHER AUDITORY CENTERS 299

*D.H. Johnson, A. Dabak and C. Tsuchitani (U.S.A.)*
Function-based modeling of binaural processing: Interaural level 301

*J.J. Guinan Jr. and R.Y.-S. Li (U.S.A.)*
Signal processing in brainstem auditory neurons which receive giant endings (calyces of Held) in the medial nucleus of the trapezoid body of the cat 321

*H.S. Colburn, Y.-a. Han and C.P. Culotta (U.S.A.)*
Coincidence model of MSO responses 335

*M. Furst, S. Eyal and A.D. Korczyn (Israel)*
Prediction of binaural click lateralization by brainstem auditory evoked potentials 347

EVOKED POTENTIALS 361

*B.C. Fullerton and N.Y.S. Kiang (U.S.A.)*
The effect of brainstem lesions on brainstem auditory evoked potentials in the cat 363

*Announcements* 391

*Author Index* 397

*Subject Index* 399